

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior listings in this application.

CLAIMS

1.-15. (Cancelled)

16. (Previously Presented) The wet treatment nozzle according to claim 27, wherein the weight is provided on at least one of an exterior wall surface or an interior wall surface of the weighted housing in the ultrasonic cleaner.

17. (Previously Presented) The wet treatment nozzle according to claim 27, wherein the weight is provided on the interior bottom surface of the weighted housing in an area where vibration caused by the ultrasonic transducer is not prevented in the ultrasonic cleaner.

18. (Previously Presented) The wet treatment nozzle according to claim 27, wherein the weight is formed by changing the thickness of the weighted housing in the ultrasonic cleaner.

19. (Previously Presented) The wet treatment nozzle according to claim 27, wherein the weight is provided on the entire surface of the wall of the weighted housing in the ultrasonic cleaner.

20.-26. (Cancelled)

27. (Currently Amended) A wet treatment nozzle comprising:

an ultrasonic cleaner comprising a first housing, a second housing, and a hollow portion between the first and second housing, an ultrasonic transducer placed on an interior bottom surface of the first housing, and a weight provided on the second housing;

an introduction passage for introducing a treatment liquid on an exterior side of the ultrasonic cleaner;

an exhaust passage which exhausts the treatment liquid on an other exterior side of the ultrasonic cleaner after a wet treatment of an object to be treated, the exhaust passage exhausting the treatment liquid that wet treated the object;

wherein the ultrasonic cleaner includes a flow path along an exterior side of the second housing between the introduction passage and the exhaust passage that guides the treatment liquid to wet treat the object to be treated, such that the treatment liquid is exposed to atmosphere between the second housing and the object to be treated,

wherein the weight minimizes propagation of energy from the ultrasonic transducer to a wall of the second housing by shifting the characteristic frequency of the wall of the second housing; and

a pressure controller operable to maintain a difference between a pressure of the treatment liquid in contact with the object to be treated and an atmospheric pressure, so that the treatment liquid in contact with the object does not flow to the outside of the flow path.

28. (Currently Amended) The wet treatment nozzle according to claim 27, wherein the first and second housings ~~housing has~~ have a U shaped cross-section.

29. (Currently Amended) The wet treatment nozzle according to claim 27, wherein the shifting of the characteristic frequency of the wall of the second housing minimizes a resonance of the wall of the second housing.

30. (Previously Presented) The wet treatment nozzle according to claim 27, wherein the flow path is configured such that only the treatment liquid contacts the object to be treated between the introduction passage and the exhaust passage.

31. (Previously Presented) The wet treatment nozzle according to Claim 27, wherein the ultrasonic cleaner guides the treatment liquid introduced from the introduction passage such that fresh treatment liquid is always supplied to the object to be treated.

32. (Currently Amended) The wet treatment nozzle according to Claim 27, wherein the weight comprises a ring-shaped weight disposed around the second housing.

33. (Previously Presented) A wet treatment nozzle comprising:
an ultrasonic cleaner comprising a a housing, an ultrasonic transducer placed on a bottom surface of the housing, and a weight on the housing;
an introduction passage associated with a first frame member, the introduction passage configured to introduce a treatment liquid on a first side of the ultrasonic cleaner; and
an exhaust passage associated with a second frame member, the exhaust passage configured to exhaust the treatment liquid on a second side of the ultrasonic cleaner after a wet treatment of an object to be treated,

wherein the ultrasonic cleaner, while vibrating, is configured to guide the treatment liquid along a bottom surface of the housing to wet treat the object, and

wherein the weight separates the first and second frame members from the housing and is configured to minimize propagation of energy from the ultrasonic transducer to the housing and to the frame members by shifting the characteristic frequency of the housing.

34. (Original) The wet treatment nozzle according to claim 33, wherein the housing and the first and second frame members cooperate to define a flow path, the flow path configured such that only the treatment liquid contacts the object to be treated between the first frame member and the second frame member.

35. (Original) The wet treatment nozzle according to claim 34 further comprising a pressure controller operable to maintain a difference between a pressure of the treatment liquid in contact with the object and an atmospheric pressure, so that the treatment liquid in contact with the object does not flow to the outside of the flow path.

36. (Original) The wet treatment nozzle according to Claim 33, wherein the weight comprises a ring-shaped weight disposed around the housing.